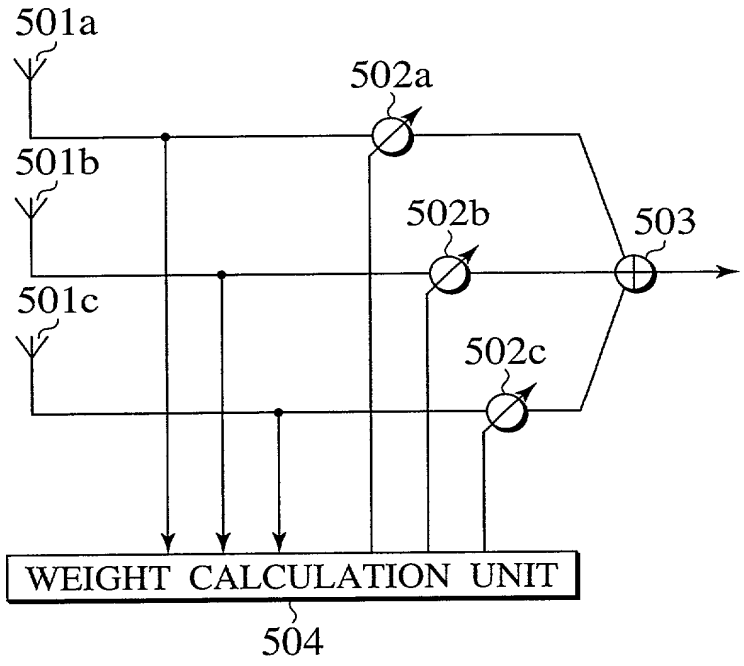
FIG.1



Feb 23 2004 12:00:00

FIG.2

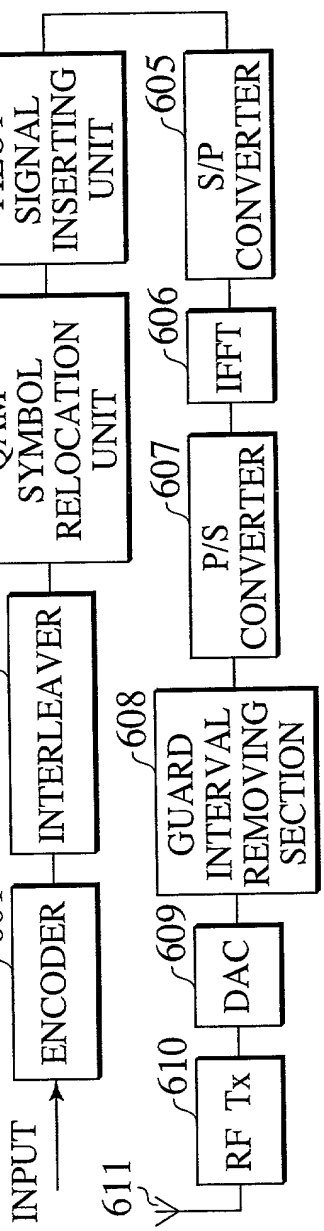

INPUT
601
ENCODER
602
INTERLEAVER
603
QAM SYMBOL RELOCATION UNIT
604
PILOT SIGNAL INSERTING UNIT
605
S/P CONVERTER
606
IFFT
607
P/S CONVERTER
608
GUARD INTERVAL REMOVING SECTION
609
DAC
610
RF Tx
611

FIG.3

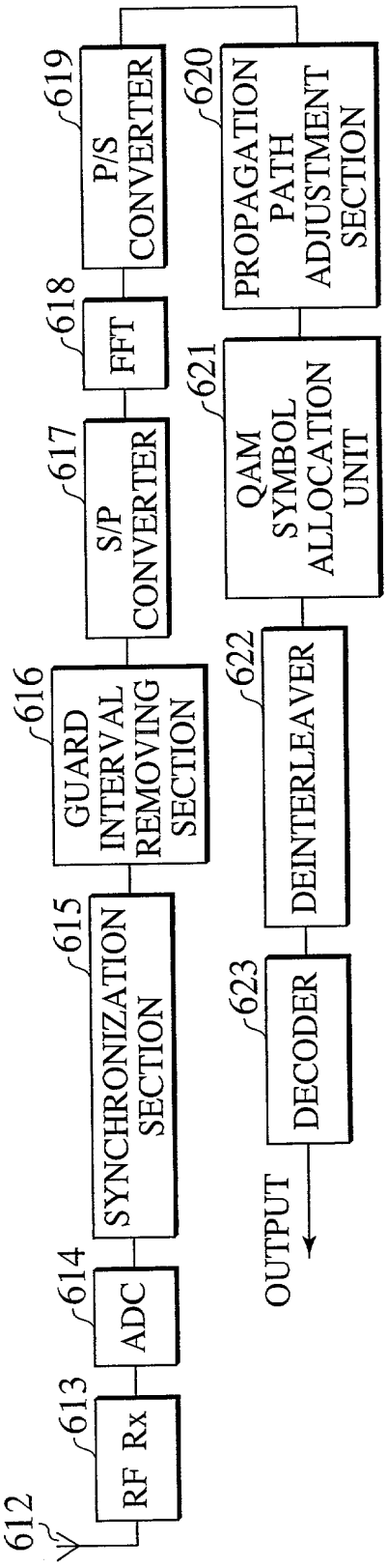

612
613
RF Rx
614
ADC
615
SYNCHRONIZATION SECTION
616
GUARD INTERVAL REMOVING SECTION
617
S/P CONVERTER
618
FFT
619
P/S CONVERTER
620
PROPAGATION PATH ADJUSTMENT SECTION
621
QAM SYMBOL ALLOCATION UNIT
622
DEINTERLEAVER
623
DECODER
OUTPUT

FIG.4

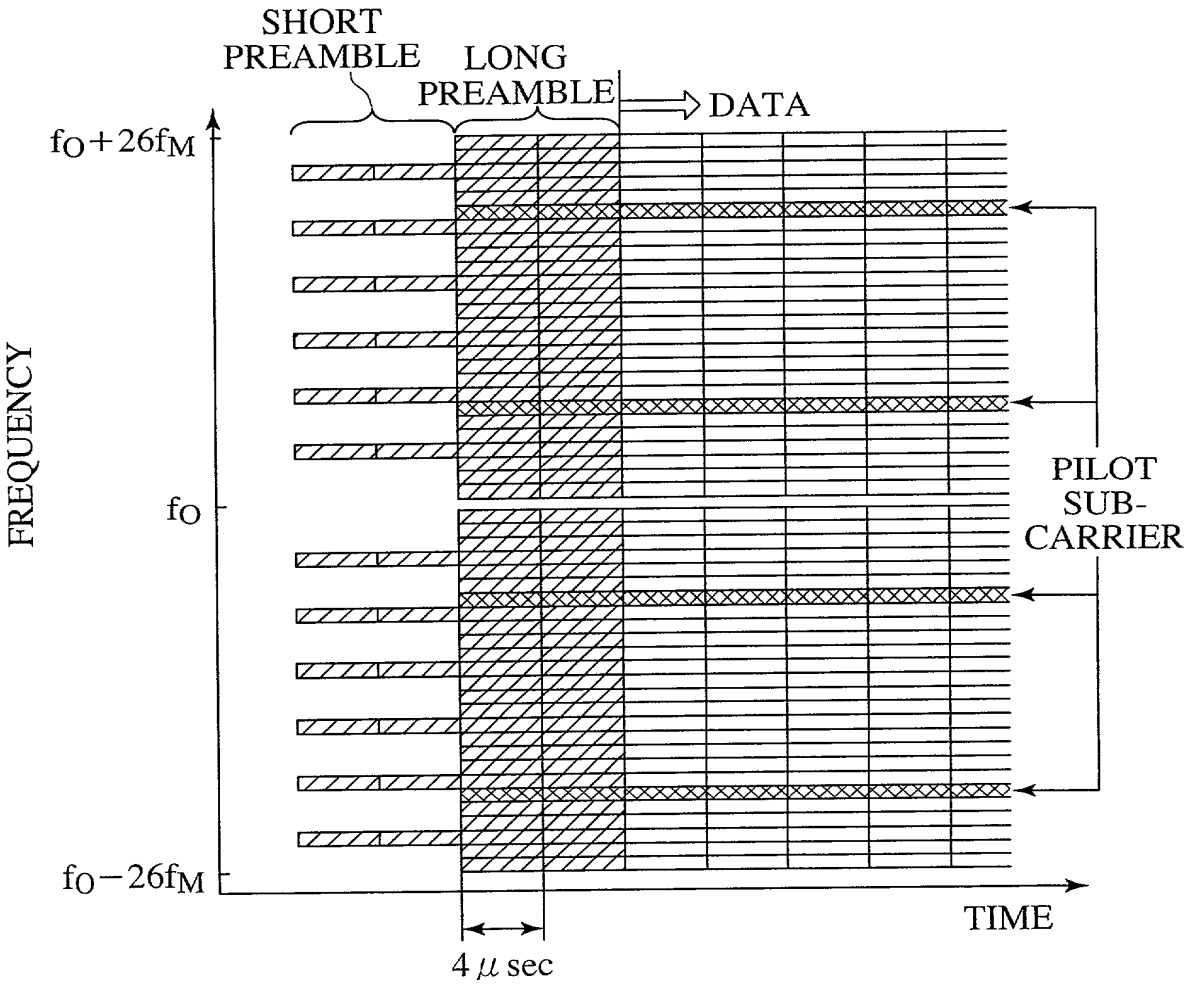

SHORT PREAMBLE
LONG PREAMBLE
DATA
f_O+26f_M
FREQUENCY
f_O
f_O-26f_M
PILOT SUB-CARRIER
TIME
4 μ sec

FIG.5

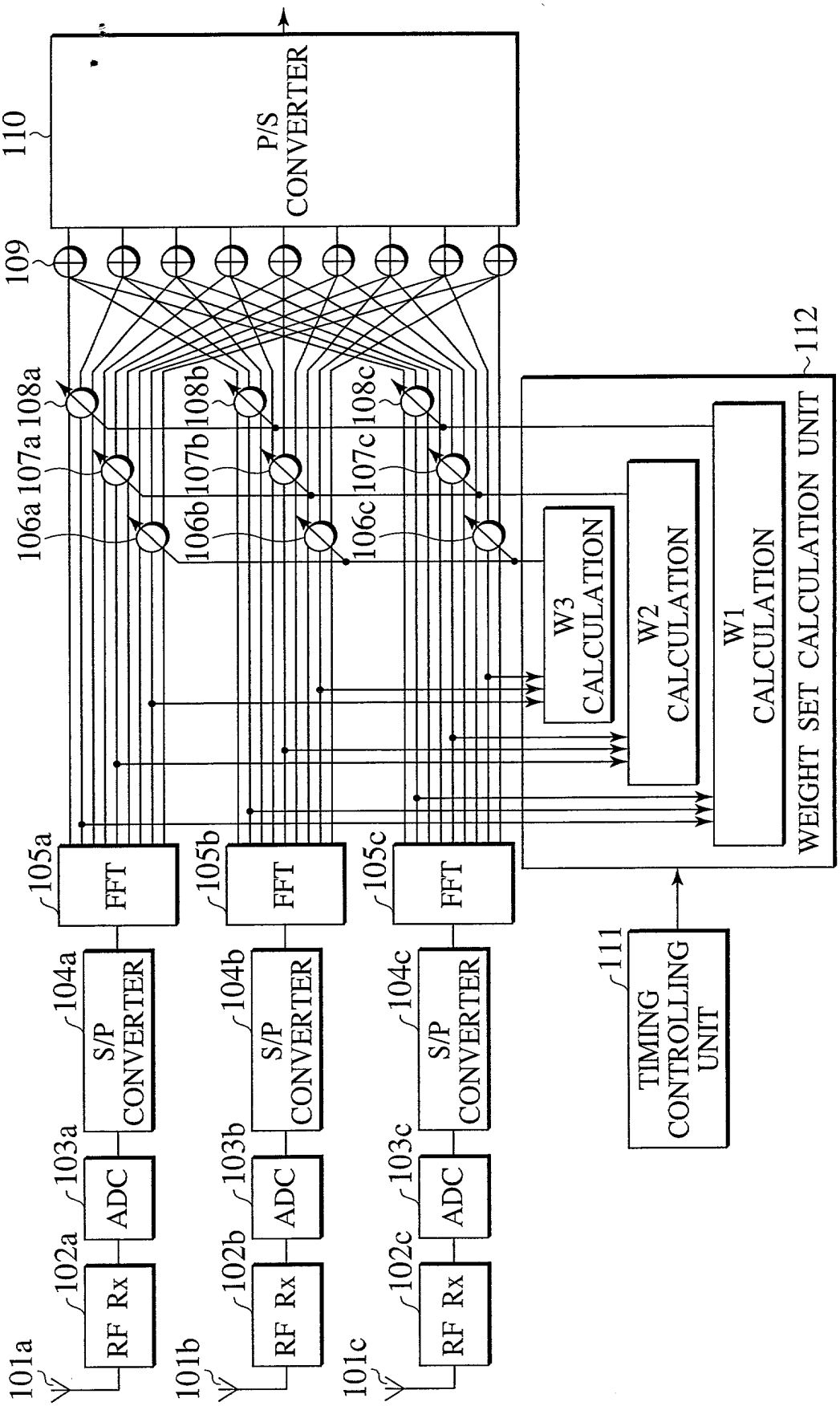

110
P/S CONVERTER
109
106a 107a 108a
106b 107b 108b
106c 107c 108c
112
W3 CALCULATION
W2 CALCULATION
W1 CALCULATION
WEIGHT SET CALCULATION UNIT
105a FFT
105b FFT
105c FFT
104a S/P CONVERTER
104b S/P CONVERTER
104c S/P CONVERTER
103a ADC
103b ADC
103c ADC
102a RF Rx
102b RF Rx
102c RF Rx
101a
101b
101c
111
TIMING CONTROLLING UNIT

FIG.6

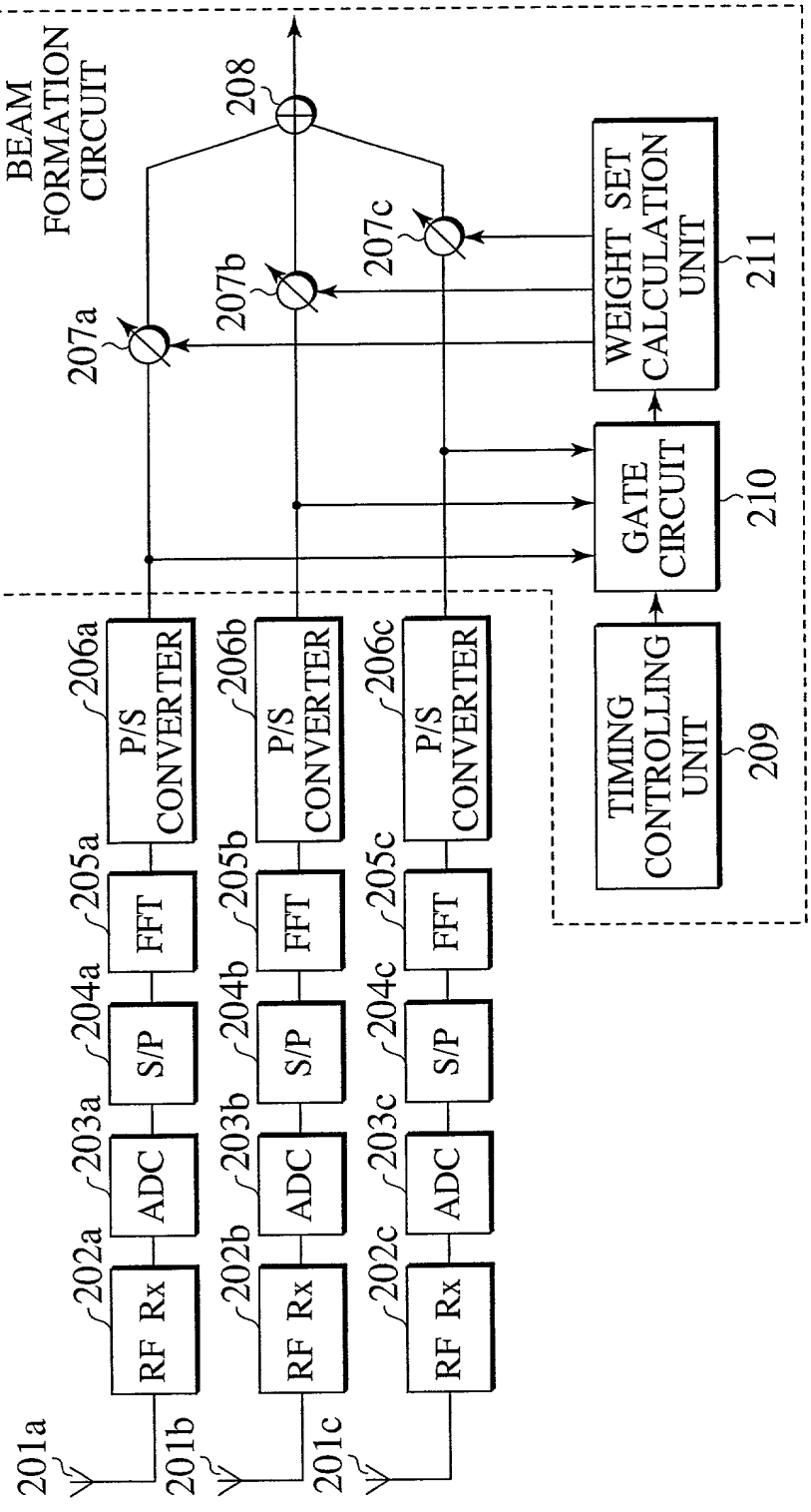

50
BEAM FORMATION CIRCUIT
208
207a
207b
207c
WEIGHT SET CALCULATION UNIT
211
GATE CIRCUIT
210
TIMING CONTROLLING UNIT
209
201a
201b
201c
202a
202b
202c
RF Rx
203a
203b
203c
ADC
204a
204b
204c
S/P
205a
205b
205c
FFT
206a
206b
206c
P/S CONVERTER

FIG.7

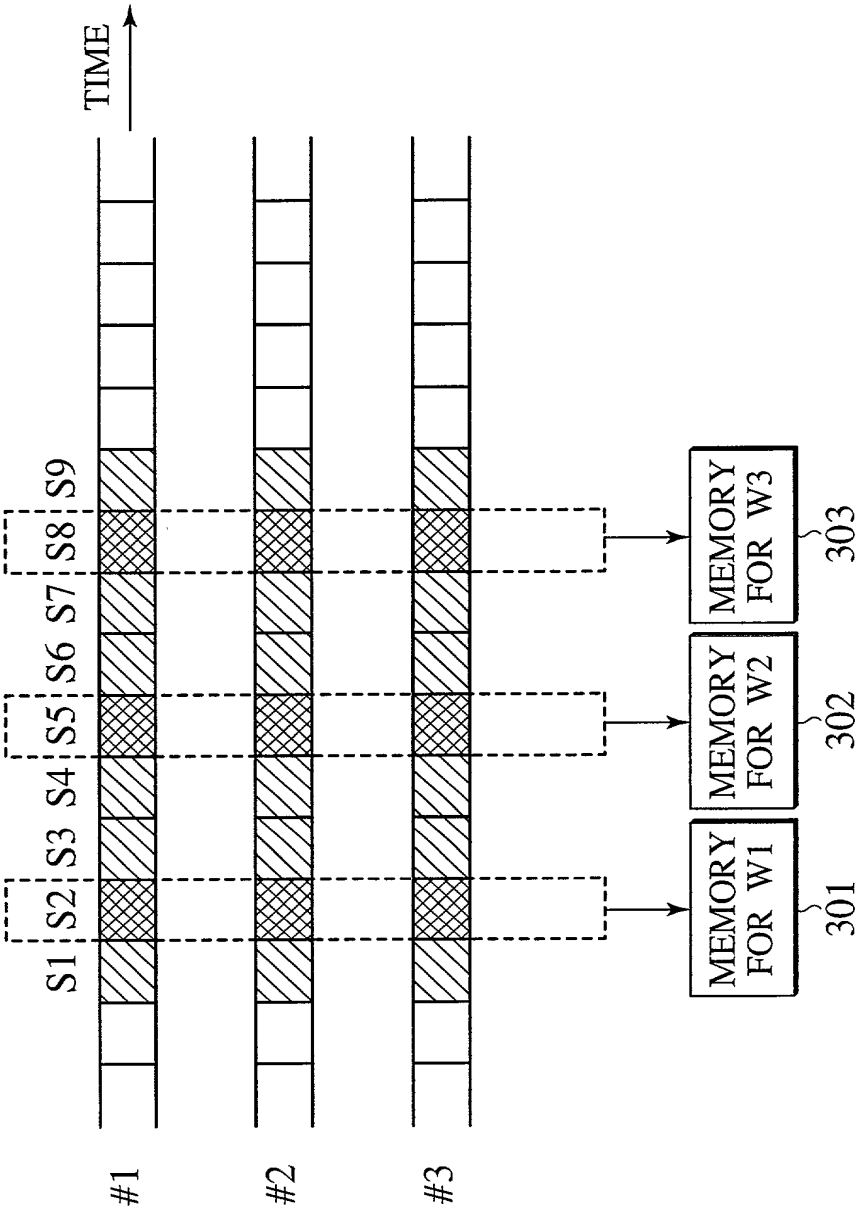
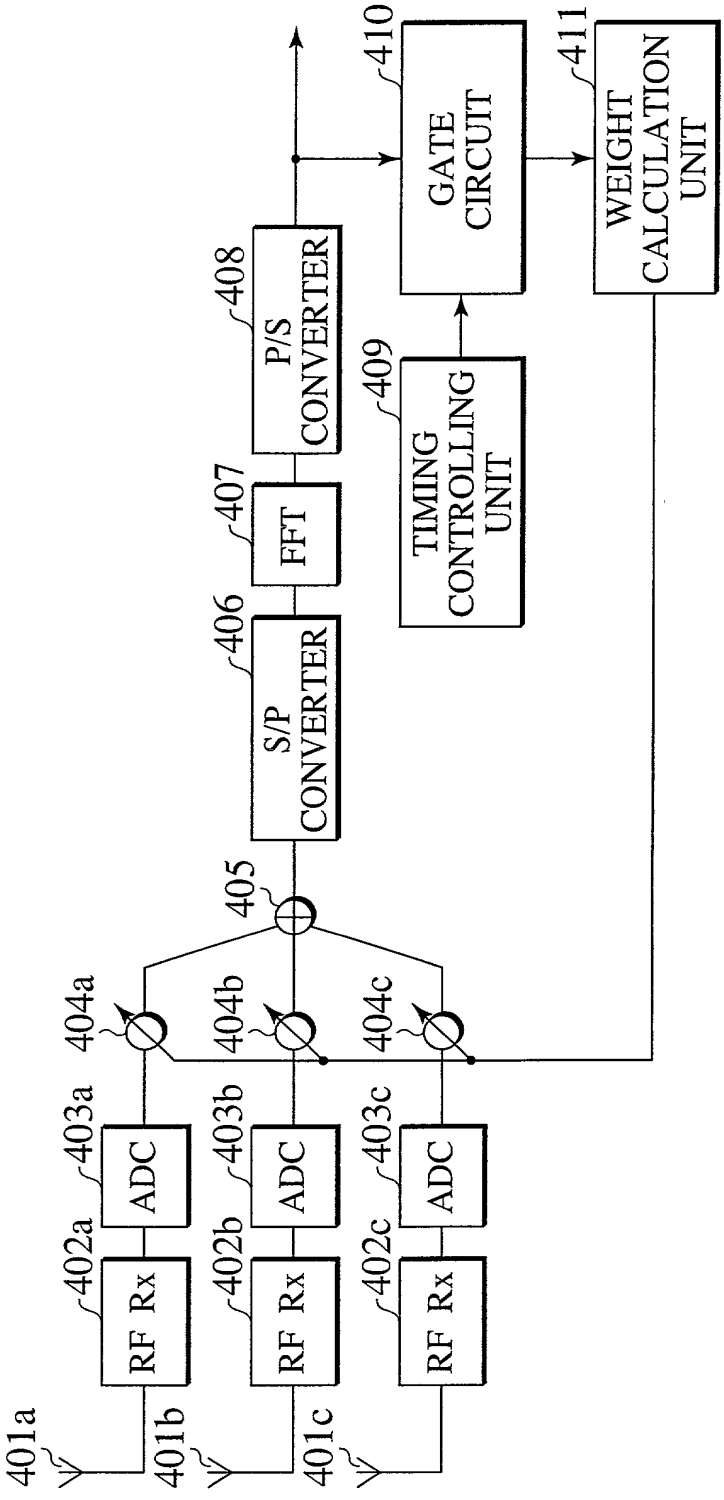

TIME
S1
S2
S3
S4
S5
S6
S7
S8
S9
#1
#2
#3
MEMORY FOR W1
301
MEMORY FOR W2
302
MEMORY FOR W3
303

FIG.8


401a
401b
401c
RF Rx
402a
402b
402c
ADC
403a
403b
403c
404a
404b
404c
405
S/P CONVERTER
406
FFT
407
P/S CONVERTER
408
TIMING CONTROLLING UNIT
409
GATE CIRCUIT
410
WEIGHT CALCULATION UNIT
411